

## CLAIMS

1. A construction member for a roof truss, said construction member characterised by:

a longitudinal body having at least a base and two upright side walls, wherein each of said upright side walls extends longitudinally beyond the base to thereby form opposed flange portions at longitudinal ends thereof, said opposed flange portions including opposed and co-axially aligned, internally pressed circular sections.

2. A construction member as in claim 1 wherein said construction member further includes at least one receival portion along its length, said at least one receival portion being characterised by opposed and co-axially aligned, internally pressed circular sections associated with the upright side walls, said side wall internally pressed circular sections being configured to receive and rotatably engage the internally pressed sections of opposed flange portions of a further construction member.

3. A construction member as in claim 1 or claim 2 wherein each of said flange portions extends beyond the base in a substantially semicircular arrangement whereby the radial centres of each semicircular flange further define the radial centres of the internally pressed circular sections associated therewith.

4. A construction member as in claim 3 wherein the internally pressed circular sections of opposed flange portions are correspondingly shaped with the internally pressed sections of the receival portion, such that when opposed flange portions of a first construction member engage with those of the receival portion of a second construction member, the first construction member is rotatable by way of engagement of corresponding internally pressed circular sections.

5. A construction member as in claim 4 wherein each of the internally pressed sections further includes a central aperture so that when opposed flange portions of the first construction member engage with those of the receival portion of the second construction member, the apertures of each internally pressed sections become co-axially aligned.

6. A construction member as in claim 4 or claim 5 wherein said first and second construction members are further lockable at a predetermined angle with respect to one another.

7. A construction member as in claim 6 wherein the first and second construction members are lockable at a predetermined angle with respect to one another using a bolt adapted to extend through co-axially aligned apertures of the internally pressed sections.

8. A construction member as in claim 7 wherein each of said opposed flange portions of the construction member includes a ferrule positioned transversely therebetween, said ferrule being configured to prevent internal deflection of the flange portions when said bolt is tightened.

9. A construction member as in claim 8 wherein said ferrule is cylindrical and is of a diameter slightly greater than that of the internally pressed sections of opposed flange portions so that it may be maintained therebetween.

10. A construction member as in any one of the above claims wherein at least a longitudinal portion of the construction member further includes two upper edges extending inwards from the upright side walls to thereby form a longitudinal channel therebetween.

11. A construction member as in claim 10 wherein the upper edges of the construction member are splayed above and adjacent the at least one receival portion, to thereby allow for the opposed flange portions of a further construction member to be received therethrough.

12. A construction member as in claim 11 wherein when a first construction member is received within the receival portion of a second construction member, and a compressive force is applied to the upright side walls of the receival portion, the splayed upper edges of the second construction member bite into the upright side walls of the first construction member and thereby provide a secondary locking means.

13. A construction member as in claim 11 or claim 12 wherein said splayed upper edges extend substantially upwardly and outwardly and then inwardly from the upright side walls.

14. A construction member as in claim 10 wherein the construction member does not include upper edges above and adjacent the at least one receival portion, to thereby allow for the opposed flange portions of a further construction member to be received therethrough.

15. A construction member as in any one of the above claims wherein said base includes a longitudinal indent.

16. A connection for roof truss members, said connection characterised by:
  - a first member including two parallel and spaced apart longitudinal surfaces having a pair of inwardly pressed and transversely aligned circular sections associated with an end thereof;
  - a second member including two parallel and spaced apart longitudinal surfaces having a pair of inwardly pressed and transversely aligned circular sections at a predetermined position along the length of the second member, said second member further having two transversely opposed, upper gripping edges above the pair of inwardly pressed circular sections;

said first and second members adapted to be connected by way of engagement of the first member circular sections within the second member circular sections allowing said first and second members to rotate relative to one another, said first member further being lockable at a predetermined angle relative to the first member by applying an inward force on the engaging circular portions, said inward force further causing said upper gripping edges to grip the corresponding longitudinal surfaces of the first portion.
17. A connection according to claim 16 wherein each of said circular portions include a central aperture such that when two pairs of circular portions engage one another, the central apertures are coaxially aligned.
18. A connection according to claim 17 wherein said second member is rotatable relative to said first member about a shaft adapted to extend through said coaxial apertures.
19. A connection according to claim 18 wherein said shaft is in the form of a bolt which when screwed provides said inward force.
20. A connection according to claim 19 wherein said connection includes a means to maintain the spaced apart relationship between parallel surfaces of the first member despite tightening of the bolt which urges said surfaces together.
21. A connection according to any one of claims 16-20 wherein said first member is a chord member of the roof truss.
22. A connection according to any one of claims 16-21 wherein said second member is a stiffening member of the roof truss.

23. A metal roof truss including:

at least one longitudinal stiffening member including a base and two parallel and spaced apart side walls, said side walls extending a predetermined distance longitudinally beyond the base to thereby form parallel and spaced apart end flanges; and

at least one longitudinal chord member including a base and two parallel and spaced apart side walls whereby at least one receiving section of the chord member is adapted to receive parallel and spaced apart end flanges of a first end of the stiffening member, said end flanges and receiving sections including inwardly pressed circular sections configured so that they rotatably engage.

24. A metal roof truss according to claim 23 wherein said end flanges extend beyond the base in a substantially semicircular arrangement whereby the radial centres of each flange also define the radial centres of inwardly pressed circular sections associated with each flange.

25. A metal roof truss according to claim 23 or claim 24 wherein said metal roof truss includes a lower chord member adapted to lie substantially flat and parallel to the ground and two upper chord members connected at an apex above said lower chord member and to opposed ends of the lower chord member in a triangular arrangement.

26. A metal roof truss according to claim 25 wherein said metal roof truss includes a web of stiffening members that support the upper and lower chord members.

27. A metal roof truss according to any one of claims 23-26 wherein said chord and stiffening members further include upper edges extending along at least a portion of the members, said upper edges defining an open longitudinal channel therebetween.

28. A metal roof truss according to any one of claims 23-27 wherein the receiving section of the chord member includes splayed upper edges located above and adjacent the inwardly pressed sections, the splayed edges extending substantially upwardly and outwardly and then inwardly toward the parallel and spaced apart side walls of the stiffening member.

29. A metal roof truss according to any one of claims 23-28 wherein each inwardly pressed circular section of the chord and stiffening members includes an aperture at its centre such that when engaged, the internally pressed sections of each member become coaxially aligned.

30. A metal roof truss according to any one of claims 28 or claim 29 wherein said stiffening member is lockable to said chord member using a bolt adapted to extend through co-axially aligned apertures of said inwardly pressed sections.

31. A metal roof truss according to any one of claim 30 wherein when said bolt is tightened, the semicircular flanges and side walls are prevented from internally deflecting by a cylindrical ferrule locked there between.

32. A metal roof truss according to any one of claims 30-31 wherein just prior to said bolt being tightened, the free end of the stiffening member is able to rotate about said bolt.

33. A metal roof truss according to any one of claims 30-32 wherein when said bolt is tightened, said internally extending splayed edge bites into the side walls of the stiffening member thereby acting as a secondary locking means.

34. A metal roof truss according to any one of claims 23-33 wherein an apex plate joins stiffening members and chord members at the roof truss's upper apex.